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Wednesday
September 28, 1988

Part IV

Department of the Interior

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Final Rules

DEPARTMENT OF THE INTERIOR

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Reclassification of the Alabama Cavefish from Threatened to Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: This rule reclassifies the Alabama cavefish, *Speoplatyrhinus poulsoni*, from threatened or endangered under the authority of the Endangered Species Act of 1973, as amended. The critical habitat designation remains unchanged. The Alabama cavefish is known only from Key Cave in Lauderdale County, Alabama. A hydrological survey for a proposed solid waste landfill determined an existing sewage sludge disposal operation is within the recharge area of Key Cave (Aley 1986). The land immediately above and around Key Cave has numerous sinkholes and water collecting depressions and is in agricultural row-crops. The application of pesticides to these crops may impact the fauna in Key Cave.

This determination increases the protection provided by the Endangered Species Act of 1973 (Act), as amended.

EFFECTIVE DATE: October 28, 1988.

ADDRESS: The complete file for this rule is available for inspection, by appointment, during normal business hours at the Jackson Field Office, U.S. Fish and Wildlife Service, Jackson Mall Office Center, Suite 316, 300 Woodrow Wilson Avenue, Jackson, MS 39213.

FOR FURTHER INFORMATION CONTACT: James H. Stewart at the above address (601/965–4900, FTS 490–4900).

SUPPLEMENTARY INFORMATION:

Background

The Alabama cavefish was described by J.E. Cooper and R.A. Kuehne in 1974. *Speoplatyrhinus* is a monotypic genus known from only Key Cave, Lauderdale County, Alabama. It was first collected in 1967 by Cooper (Cooper and Kuehne 1974). Only nine Alabama cavefish in total are known to have been collected. The population in Key Cave is estimated at fewer than 100 individuals by Cooper (USFWS 1985). The largest number of cavefish ever observed on a single visit to Key Cave was 10 individuals.

The Alabama cavefish lacks externally visible eyes and pigmentation. Like all other members of the cavefish family, it has a jugular vent and a large branchial cavity, probably for oral incubation of eggs. Pelvic fins are absent and the head is elongated and flattened. The typical length is just less than 3 inches (about 7 centimeters) (Cooper and Kuehne 1974).

The Service initially listed the Alabama cavefish as a threatened species and designated Key Cave as critical habitat on October 11, 1977 (42 FR 45526). Since the initial listing, the Service funded a survey of caves in Lauderdale and Colbert Counties, Alabama in 1985 and a follow-up survey of three caves in 1986 in an effort to locate other populations of Alabama cavefish. This project studied 120 caves, 27 of which were surveyed in 1985 (Cobb 1985). The remaining caves were not field surveyed because earlier surveys had found southern cavefish or no fauna or determined that permanent water was not present. Southern cavefish (*Typhlichthys subterranus*) and Alabama cavefish are not known to co-exist, possibly because of competition for food and space. In the 1985 survey, three caves were selected for further survey in 1986 because of habitat present or the sighting of a cavefish. The 1986 survey did not capture any cavefish, but its observations further strengthened the probability these are southern cavefish (Cobb 1986). The southern cavefish, *Typhlichthys subterranus*, occurs to the east and south of Key Cave and probably also to the north (Cobb 1985, 1986).

The type locality of the Alabama cavefish is situated in the Warsaw component of Tuscumbia limestone, which is known to contain caves only in the western portion of Lauderdale County. Geologically, the Key Cave area is not part of a continuous cave-containing limestone area (the eastern two-thirds of Lauderdale County contains the Fort Payne chert formation of a different geologic age) (Cobb 1985). Key Cave is a relatively large and multi-level cave with over 10,000 feet of mapped passage. Water depths may approach 20 feet in late spring (USFWS 1985). The Tennessee Valley Authority owns the two entrances and has erected a fence to discourage spelunkers. Most of the surrounding land is privately owned. A hydrological study for a proposed solid waste landfill near Key Cave concluded the recharge area for this cave included most or all of the land lying above the elevation of Pickwick Lake in eight sections of T3S, R12W (Aley 1986). Most of this area is in agricultural row-crops. A sewage sludge disposal project developed by the Tennessee Valley Authority and operated intermittently by the City of Florence, Alabama, is probably within this recharge area. The Serivce published a proposed rule to reclassify this species from threatened to endangered in the **Federal Register** (52 FR 46106) on December 4, 1987.

Summary of Comments and Recommendations

In the December 4, 1987, proposed rule and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate State agencies, county and local governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. A newspaper notice was published in the Florence Times Daily on December 12, 1987, and in the The Birmingham News on December 13, 1987, which invited general public comment. Three comments were received. One Federal agency and two professional biologists commented in support of the reclassification. There were no comments in opposition.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that the Alabama cavefish (*Speoplatyrhinus poulsoni*) should be classified as an endangered species. Procedures found at section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to the Alabama cavefish (*Speoplatyrhinus poulsoni*) are as follows:

A. The Present or Threatened Destruction, Modificaiton, or Curtailment of its Habitat or Range

Groundwater contamination represents a major threat to the Alabama cavefish. Most of the probable recharge area for Key Cave is in agricultural production (Aley 1986). The topography is marked by sinkholes and water-collecting depressions. The Florence Demonstration Project involves land application of municipal sludge from the City of Florence and is likely within the recharge area for Key Cave (Aley 1986). Contaminants from agricultural activities and the sewage sludge application probably enter the Key Cave aquifer since Aley (1986) believes that virtually all the land is

drained through the groundwater system.

B. Overutilization for Commercial, Recreational, Scientific or Educational Purposes

Obligate cave species characteristically live longer and have considerably lower reproductive capacities than related surface species (Poulson 1961). Offers to purchase cavefish have appeared in various publications, and scientific collectors have often taken all the individuals encountered in an area. Reduction of the cavefish population by whatever event could reduce the population below the sustaining level.

C. Disease or Predation

Disease in cavefish has not been studied but it is reasonable to assume they are susceptible to disease outbreaks, especially when water quality deteriorates. Predation may be a threat. Raccoons and epigean fishes are known to prey upon cavefish, as are cave crayfish. Raccoons may venture great distances into a cave preying upon whatever they catch. Key Cave has a relatively abundant population of cave crayfish.

D. The Inadequacy of Existing Regulatory Mechanisms

The Alabama cavefish was initially listed as threatened under authority of the Endangered Species Act of 1973, as amended. Under this designation, permits may be issued for zoological exhibitions or educational purposes. The present status of this species does not warrant issuance of permits for such purposes.

E. Other Natural or Manmade Factors Affecting its Continued Existence.

Cavefish are very dependent upon the energy source supporting the food supply. In Key Cave, the primary energy source is guano from a maternity colony of the endangered gray bat, *Myotis grisescens.* A decline in this maternity colony would undoubtedly affect the Alabama cavefish. The low reproductive capability and low population are natural limitations to the ability of this species to recover from any adversity.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to make this reclassification final. This reclassification is appropriate because (1) this species is still known from only one cave after extensive surveys of other caves in the vicinity; (2) the population is very small in this one cave; and (3) the water quality in this cave is probably being degraded by surface activities. These factors and those described earlier place the Alabama cavefish in danger of extinction.

Critical Habitat

This rule does not make any change in the critical habitat as presently designated.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions were initiated by the Service for this species following its listing. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402. Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or destroy or adversely modify its critical habitat. If a Federal action may adversely affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. Since the Alabama cavefish is already protected under section 7 of the Act by its previous listing as threatened, reclassification to endangered will not affect this requirement. For example, Federal involvement with the Alabama cavefish will probably continue to involve the Environmental Protection Agency in pesticide registration and water contamination.

The Act and implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of a commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered wildlife species under certain circumstances. Regulations governing permits are at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship that would be suffered if such relief were not available.

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

References Cited

Aley, T. 1986. Hydrogeologic Investigations for a Proposed Landfill near Florence, Alabama. A contract study and report for Waste Contractors, Inc. 20 pp.

Cobb, R.M. 1985. A Reconnaissance of Caves in Lauderdale and Colbert Counties, Alabama, for the Alabama cavefish, *Speoplatyrhinus poulsoni.* A survey and report for the U.S. Fish and Wildlife Service. Jackson, MS. 26 pp. with field data forms.

Cobb, R.M. An Attempt to Collect Specimens of Cavefish at Three Cave Sites in Northeast Alabama. A survey and report for the U.S. Fish and Wildlife Service. Jackson, MS. 8 pp.

Cooper, J.E., and R.A. Kuehne. 1974. *Speoplatyrhinus poulsoni:* A New Genus and Species of Subterranean Fish from Alabama. Copeia (2):486–493.

Poulson, T.L. 1961. Cave Adaptation in Amblyopsid Fishes. Ph. D. dissert., Univ. Mich. Ann Arbor. 185 pp.

U.S. Fish and Wildlife Service. 1985. Revised Recovery Plan for the Alabama Cavefish *Speoplatyrhinus poulsoni* Cooper and Kuehne 1974. 64 pp.

Author

The primary author of this final rule is James Stewart (see **ADDRESSES** section) 601/965–4900 or FTS 490–4900).

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulation Promulgation

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

PART 17—[AMENDED]

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93–205, 87 Stat. 884; Pub. L. 94–359, 90 Stat. 911; Pub. L. 95–632, 92 Stat. 3751; Pub. L. 96–159, 93 Stat. 1225; Pub. L. 97–304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*); Pub. L. 99–625, 100 Stat. 3500 (1986), unless otherwise noted.

§ 17.11 [Amended]

2. Amend § 17.11(h), the list of Endangered and Threatened Wildlife, under "FISHES", by revising the "Status" column for the entry "Cavefish, Alabama * * *" to read "E" instead of "T", and revising the "When listed" column for the same species to read "28, 328".

Dated: September 2, 1988.

Susan Recce,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 88–22147 Filed 9–27–88; 8:45 am]

BILLING CODE 4310–55–M

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50 CFR Part 17

Endangered and Theatened Wildlife and Plants; Determination of Threatened Status for Oxytropis campestris var. chartacea

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines threatened status for *Oxytropis campestris* var. *chartacea* (Fassett's locoweed) under authority of the Endangered Species Act (Act) of 1973, as amended. The species is known from six sites in Portage and Waushara Counties, Wisconsin. Threats include human disturbance and grazing. This action will implement the protection provided by the Act for *Oxytropis campestris* var. *chartacea*.

EFFECTIVE DATE: October 28, 1988.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours at the Service's Regional Office of Endangered Species, Federal Building, Fort Snelling, Twin Cities, Minnesota 55111.

FOR FURTHER INFORMATION CONTACT: James M. Engel (see **ADDRESSES** section) at 612/725–3276 or FTS 725–3276.

SUPPLEMENTARY INFORMATION:

Background

Oxytropis campestris var. *chartacea*, a member of the pea family Fabaceae, was first described as a distinct species, *Oxytropis chartacea* (Fassett 1936). This herbaceous perennial has many leaves clustered in a rosette at the base of the stem. Leaves are pinnately compound, 2 to 8 inches (5 to 20 centimeters) long, with about 15 pairs of small, pointed leaflets (Alverson 1982). Most of the plant is covered by dense, white, silky hairs which give it a silvery-gray appearance. Barneby (1952) considered the taxon a variety of *Oxytropis campestris*. Although it is very similar to var. *johannensis*, the pod of var. *chartacea* is shorter, the vesture of the whole plant more copious and looser, and the stipules permanently pilose (Barneby 1952). *Oxytropis campestris* var. *chartacea* produces attractive rose-purple flowers from mid-May through mid-June. Fruits develop as individual pods from each flower.

Oxytropis campestris var. *chartacea* is known from six sites (less than 5,000 individual plants) in Portage and Waushara Counties, central Wisconsin. Attempts to locate additional populations have been unsuccessful. The species occurs on open to partially shaded sand/gravelly shorelines of small landlocked hardwater lakes. The species is not found where it is overtopped by grasses, woody shrubs, or trees. The plant will grow where the overstory is sparse enough to permit sunlight for part of the day (Alverson 1982). Fassett's locoweed is often found in association with *Carex* spp., *Juncus* spp., and *Eleocharis spp.* Lake level fluctuations maintain the species' required open habitat.

Oxytropis campestris var. *chartacea* was among those species covered by a report on endangered, threatened, and extinct plants which was prepared by the Secretary of the Smithsonian Institution in accordance with section 12 of the Endangered Species Act of 1973 (16 U.S.C. *et seq.*). This report, designated as House Document No. 94–51, was presented to Congress on January 9, 1975. In the **Federal Register** of July 1, 1975 (40 FR 27823), the Service issued a notice of its acceptance of this report as a petition within the context of section 4(c)(2) of the Act, now section 4(b)(3)(A) and of its intention to review the status of the plant taxa named therein. In the **Federal Register** of June 16, 1976 (41 FR 24523), the Service issued a proposed rule to determine endangered status for approximately 1,700 vascular plant species, including *O. c.* var. *chartacea*. General comments received on that proposal were summarized in the **Federal Register** of April 26, 1978 (43 FR 17909). In the **Federal Register** of December 10, 1979 (44 FR 70796), the Service issued a notice withdrawing that portion of the proposal of June 16, 1976, that had expired, along with four other proposals that had also expired. In the **Federal Register** of September 27, 1985 (50 FR 39526–39527), the Service issued a revised notice of review. *O. c.* var. *chartacea* was placed in Category 1 of that notice, meaning that the Service had substantial information supporting the appropriateness of proposing endangered or threatened status. On December 4, 1987, the Service published in the **Federal Register** (52 FR 46336), a proposal to list *Oxytropis campestris* var. *chartacea* as a threatened species. The Service now determies *O. c.* var. *chartacea* to be a threatened species with the publication of this final rule.

Summary of Comments and Recommendations

In the December 4, 1987 proposed rule (52 FR 46336) and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate State agencies, county governments, scientific organizations, and other interested parties were contacted and requested to comment. Newspaper notices inviting public comment were published in the *Stevens Point Journal*, Stevens Point, Wisconsin; and *Waushara Argus*, Wautoma, Wisconsin. No comments were received. The Wisconsin Department of Natural Resources supported the proposed rule (52 FR 46336) and advised the Service of continued support for this final rule but did not have any new species information (R. Nicotera, Wisconsin Department of Natural Resources, pers. comm. 1988).

Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the

Federal lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Oxytropis campestris* var. *chartacea* (Fassett's locoweed) are as follows:

A. The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range

This species occurs wholly on privately-owned land, residential lots, lake front lots and at a summer camp. Human use of sandy shorelines has extirpated the plant from several historic sites in Bayfield and Waushara Counties (Alverson 1982). At current sites, plants occur adjacent to areas not used by humans for recreational or other purposes. Although moderate human use of shoreline appears to be compatible with the species' survival, increasing shoreline developments would jeopardize the species.

B. Overutilization for Commercial, Recreational, Scientific or Educational Purposes

Due to the limited distribution and small population size of *Oxytropis campestris* var. *chartacea*, indiscriminate collecting of any nature could have serious effects.

C. Disease of Predation.

Several of the sites at which *O.c.*. var. *chartacea* formerly occured have been heavily grazed by domestic livestock for many years. Circumstantial evidence suggests that such grazing eliminated the plant from these sites. Grazing is a potential threat to populations that still survive (Alverson 1982).

D. The Inadequacy of Existing Regulatory Mechanisms

Oxytropis campestris var. *chartacea* is officially listed as threatened in Wisconsin. However, such classification is of little practical benefit, since the species occurs entirely on private land. The Endangered Species Act would provide the basis for substantial additional conservation measures, such as habitat acquisition, land use agreements, and development of a recovery plan.

E. Other Natural or Manmade Factors Affecting its Continued Existence

Oxytropis campestris var. *chartacea* is vulnerable because of its restricted range and low numbers. A substantial disturbance could reduce a population to the point where long-term genetic viability would be lost, resulting in extinction.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to make this rule final. Based on this evaluation, the preferred action it to list *Oxytropis campestris* var. *chartacea* as threatened. Such status is necessary due to the species' restricted range and the multiplicity of threats facing it and its habitat. It does not, however, appear to be in immediate danger of extinction. However, without protection and further research, the vulnerability of this species will continue. Critical habitat is not being designated for reasons discussed in the following section.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for *Oxytropis campestris* var. *chartacea* at this time. Publishing a detailed description and map of this species' habitat might stimulate public interest and make this species more vulnerable to taking by collectors (see factor "B" in the "Summary of Factors Affecting the Species"). No net benefit would be derived from designating critical habitat and so it would not be prudent or beneficial to designate critical habitat for *Oxytropis campestris* var. *chartacea* at this time.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following the listing. Recovery actions that may be of benefit to *O.c.* var. *chartacea* include protection from excessive grazing and pedestrian traffic, and reintroduction on previously occupied sites. The protection required of Federal agencies and the prohibitions against taking are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402. Section 7(a)(2) requires Federal agencies to insure that activities they authorize, fund, to carry out are not likely to jeopardize the continued existence of a listed species or result in destruction or adverse modification of its critical habitat. If a Federal action may affect a listed species, the responsible Federal agency must enter into formal consultation with the Service. No Federal involvement is anticipated for *Oxytropis campestris* var. *chartacea* at this time.

The Act and its implementing regulations found at 50 CFR 17.71 and 17.72 set forth a series of general trade prohibitions and exceptions that apply to all threatened plants. With respect to *Oxytropis campestris* var. *chartacea*, all trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.71 apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, sell or offer it for sale in interstate or foreign commerce, or remove it from areas under Federal jurisdiction and reduce it to possession. Seeds from cultivated specimens of threatened plant species are exempt from these prohibitions provided that a statement of "cultivated origin" appears on their containers. Certain exceptions can apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.72 also provide for the issuance of permits to carry out otherwise prohibited activities involving threatened species under certain circumstances. With respect to Fassett's locoweed, it is anticipated that few trade permits would ever be sought or issued since the species is not common in cultivation or in the wild. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Office of Management Authority, U.S. Fish and Wildlife Service, P.O. Box 27239, Washington, DC 20038–7329 (202/343–4955).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined by the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of

1973, as amended. The reasons for this determination were published in the Federal Register on October 25, 1983 (48 FR 49244).

References Cited

Alverson, W.S. 1982. Status report on *Oxytropis campestris* L. var. *chartacea* (Fassett) Barneby. Unpubl. rep. 15 pp.

Barneby, R.C. 1952. A revision of the North American species of *Oxytropis* DC. Proc. Calif. Acad. Sci. 17:177–312.

Fassett, N.C. 1936. Notes from the herbarium of the University of Wisconsin, 13. Rhodora 38:95.

Author

The primary author of this final rule is William F. Harrison (See **ADDRESSES** section) (612/725–3276 or FTS 725–3276).

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulation Promulgation

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

PART 17-[AMENDED]

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93–205, 87 Stat. 884; Pub. L. 94–359, 90 Stat. 911; Pub. L. 95–632, 92 Stat. 3751; Pub. L. 96–159, 93 Stat. 1225; Pub. L. 97–304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*); Pub. L. 99–625, 100 Stat. 3500 (1986, unless otherwise noted.

2. Amend § 17.12(h) by adding the following, in alphabetical order under Fabaceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

* * * * *

(h) * * *

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
*	*	*	*	*	*	
Fabaceae—Pea family.						
Oxytropis campestris var. *chartacea.*	Fassett's locoweed	U.S.A. (WI)	T	329	NA	NA
*	*	*	*	*	*	

Dated: September 2, 1988.

Susan Recce,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 88-22148 Filed 9-27-88; 8:45 am]

BILLING CODE 4310-55-M

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for Iris lacustris (Dwarf Lake Iris)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines threatened status for *Iris lacustris* (dwarf lake iris) under authority of the Endangered Species Act (Act) of 1973, as amended. *Iris lacustris* is found along the northern shores of Lakes Michigan and Huron, at about 60 sites in 10 Michigan counties and 15 sites in two Wisconsin counties, as well as several areas in Ontario. Threats to this species include continued loss of habitat and lack of appropriate overstory vegetation management. This action will implement the Federal protection provided by the Act for *Iris lacustris*.

EFFECTIVE DATE: October 28, 1988.

ADDRESS: The complete file for this rule is available for inspection, by appointment, during normal business hours at the Service's Regional Office of Endangered Species, Federal Building, Fort Snelling, Twin Cities, Minnesota 55111.

FOR FURTHER INFORMATION CONTACT: James M. Engel, Endangered Species Coordinator (see **ADDRESS** section) at 612/725–3276 or FTS 725–3276.

SUPPLEMENTARY INFORMATION:

Background

Iris lacustris, a member of the family Iridaceae, has been treated as a variety of *Iris cristata* (Dykes 1913), but is recognized by others as a distinct species (Foster 1937). *Iris lacustris* is an herbaceous perennial, a diminutive iris with flat, erect, narrow leaves that sheath each other at the base. Leaves are 3 inches (7.5 centimeters) tall at the onset of flowering in late spring, later reaching 5–8 inches (15 cm). The flowers are 2–2.5 inches (6 cm) long, have three petals and sepals with the sepals being larger and the most conspicuous part of the flower, ranging in color from blue to dark violet. Fruit capsules are about 1 inch (2.5 cm) tall and triangular. *Iris lacustris* is rhizomatous and forms dense colonies under favorable conditions.

Iris lacustris is found in Michigan, Ontario, and Wisconsin. Reports in the literature of this species' occurrence on the shores of Lake Superior have been discounted (Guire and Voss 1963). In Michigan, the species is found at about 60 sites in 10 counties on the northern shores of Lake Michigan and Huron (The Nature Conservancy data files). In Ontario, it is found on Manitoulin Island and the Bruce Peninsula. Makholm (1986) recorded *Iris lacustris* at 15 scattered colonies in two counties on Wisconsin's Door Peninsula. The lakeshore habitat of this species is usually sandy or gravelly and open, although the plant occurs in the partial shade of coniferous trees and in mesic areas at the forest edge. The species seems to thrive on calcareous gravels, in partial shade near the lakeshore (E.G. Voss, University of Michigan, pers. comm. 1987). Voss also mentions that the plant will grow in crevices of limestone, or dolomite, when the substrate is bedrock. *Iris lacustris* grows in dense colonies and may be scattered in small patches in upper beach habitats, where it is shaded (Makholm 1986). The plant is not found in full sunlight.

Although some colonies of *Iris lacustris* are protected on public land, most of the plants are threatened by habitat destruction and a lack of active management. It is estimated that less than 20 percent of the *Iris lacustris* colonies in Michigan receive any type of habitat protection, while approximately 40 percent of the Wisconsin *Iris lacustris* colonies are considered to be protected. The rarity of the species and various threats indicate that it is likely to become endangered in the long term. Federal actions involving this iris begin with section 12 of the Endangered Species Act of 1973, which directed the Secretary of the Smithsonian Institution to prepare a report on those plants

considered to be endangered, threatened, or extinct. This report, designated as House Document No. 94–51, was presented to Congress on January 9, 1975. On July 1, 1975, the Service published a notice in the **Federal Register** (40 FR 27823) of its acceptance of the report of the Smithsonian Institution as a petition within the context of section 4(c)(2), now section 4(b)(3)(A), of the Act and of its intention thereby to review the status of those plants. *Iris lacustris* was included in the Smithsonian petition as a candidate for threatened status.

On December 15, 1980, the Service published a revised notice of review for native plants in the **Federal Register** (45 FR 82480); *Iris lacustris* was included as a Category-1 species (species for which data in the Service's possession indicate listing is warranted). This iris was still included in Category 1 in the September 27, 1985, revised notice of review of plants (50 FR 39526).

Section 4(b)(3)(B) of the Endangered Species Act, as amended in 1982, requires the Secretary to make findings on certain pending petitions within 12 months of their receipt. Section 2(b)(1) of the 1982 amendments further requires that all petitions pending on October 13, 1982, be treated as having been newly submitted on that date. This was the case for *Iris lacustris* because the 1975 Smithsonian report had been accepted as a petition. On October 13, 1983; October 12, 1984; October 11, 1985; October 10, 1986; and October 13, 1987, the Service found that the petitioned listing of these species was warranted, but that listing this species was precluded due to other higher priority listing actions. On December 4, 1987, the Service published a proposal in the **Federal Register** (52 FR 46334) to list *Iris lacustris* as a threatened species. The Service now determines *Iris lacustris* to be a threatened species with the publication of this final rule.

Summary of Comments and Recommendations

In the December 4, 1987 proposed rule (52 FR 46334) and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate state agencies, county governments, scientific organizations, and other interested parties were contacted and requested to comment. Newspaper notices inviting public comment were published in the Green Bay *News Chronicle* on December 17, 1987; *Escanaba Daily Press, Petoske News Review, Manistee News Advocate,* and *Menominee Herald-Leader,* on December 21, 1987; the *Charlevoix Courier,* on December 23, 1987; and *The St. Ignace News, The Alpena News,* and *The Cheboygan Daily Tribune* on December 24, 1987.

Eight comments were received. The United States Forest Service, the Michigan Department of Natural Resources, the Michigan Chapter of the Nature Conservancy, Natural Resources Defense Council, a university professor, and a sanctuary manager supported the proposal and provided new status information. The Michigan Department of Natural Resources questioned the status information and indicated that additional information will be furnished to the Service later when recovery efforts are initiated. The U.S. Forest Service advised of occurrences of *Iris lacustris* on the Hiawatha and Huron-Manistee National Forests and that the plant adds beauty and diversity to the plant community and also seems to be a good soil stabilizer. The Nature Conservancy urged additional monitoring and taxonomic studies and habitat management research. The Natural Resources Defense Council emphasized the potential threat of commercial trade because closely related species are commonly sold through garden catalogs. The Manager of the 1000 acre Ridges Sanctuary, boreal forest community in Door County, Wisconsin which contains a large population of *Iris lacustris,* advised of his ongoing monitoring program within the sanctuary. The Michigan Department of Transportation submitted two comments, but did not take a position on the proposal. They expressed reservations about increased involvement they will have with the Federal Highway Administration in the section 7 consultation process and indicated it would be difficult for them to meet construction and roadside maintenance schedules because of the added time required for section 7 consultation procedures. The Michigan Department of Transportation is also concerned that listing *Iris lacustris* might affect their ability to maintain new safety standards along coast roads. They expressed concern about added responsibilities once *Iris lacustris* is listed, while adjoining landowners are not bound by the Act and sometimes destroy plants. Therefore the Michigan Department of Transportation supports added protection for plants on private land and further suggests continued cooperation and early consultation under section 7 with the Federal Highway Administration. Since the Michigan Department of Transportation is currently complying with the Michigan Department of Natural Resources requirements for endangered and threatened species permits, the Service will endeavor to integrate these state requirements and actions into section 7 activities so as not to cause unnecessary delay or added work. The Department of Transportation expressed a desire to cooperate with the Service, but admits they have limited control over some uses on the right-of-way. Because of the limited nature of *Iris lacustris* and the narrow habitat requirements, the number of instances in which the plant may be affected by the Michigan Department of Transportation actions may not be of the magnitude expected. The Michigan Department of Transportation also requested representation on the recovery team for *Iris lacustris.* The Service will consider the expertise of Michigan Department of Transportation staff when formulating a recovery plan for this species. The other comment from The Michigan Department of Transportation provided additional status and occurrence information.

Summary of Factors Affecting the Species

After a thorough review and consideration of information available, the Service has determined that *Iris lacustris* should be classified as a threatened species. Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Iris lacustris* Nuttall (dwarf lake iris) are as follows:

A. The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range

Iris lacustris formerly was more widely distributed than it is today (Guire and Voss 1963, Crispin 1981, Makholm 1986). Major habitat areas in Michigan have been significantly altered by private development to the extent that they cannot support *Iris lacustris* populations (Crispin 1981). Development of private shore areas continues and is increasing. Private residential development and associated impacts such as access road development are the greatest threats to *Iris lacustris.* In Wisconsin, Alverson (1981) identified home and cottage construction, road widening, chemical spraying and salting,

and off-road vehicle use as current threats to the species' habitat. According to R. Lukes (Ridges Sanctuary, Inc., WI, pers. comm. 1987) natural plant succession combined with the construction of shoreline homes and associated disturbances has been the cause of the steady decline of *Iris lacustris* in Door County, Wisconsin. The population of *Iris lacustris* in Milwaukee was destroyed in the course of urban development (Read 1976). Voss (pers. comm. 1987) notes that roads in these developing shoreline areas are generally placed on the solid gravelly ridges, exactly where *Iris lacustris* is found.

B. Overutilization for Commercial, Sporting, Scientific or Educational Purposes.

The species has attractive flowers and so has commercial potential. Faith T. Campbell (Natural Resources Defense Council pers. comm. 1987) reports that *Iris lacustris* is being offered for sale in garden catalogs and the potential exists for increased commercial trade of this species.

C. Disease or Predation

Not known to be a threatening factor.

D. The Inadequacy of Existing Regulatory Mechanisms

This species is listed as threatened by the States of Michigan and Wisconsin. Wisconsin regulations prohibit any person from removing or transporting an endangered or threatened wild plant away from its native habitat on public property, or from property he or she does not own or control, except in the course of forestry or agricultural practices or in the construction and maintenance of a utility facility. The Michigan Endangered Species Act requires developers to determine threatened species involvement in proposed projects. Although *Iris lacustris* is offered various forms of protection under these State laws, monitoring and enforcement are difficult due to limited personnel. The Endangered Species Act offers possibilities for protection of this taxon through section 6 by cooperation between the States and the Service and through section 7 (Interagency Cooperation) requirements. The Endangered Species Act will provide additional protection for *Iris lacustris* through section 9 and the recovery process.

E. Other Natural or Manmade Factors Affecting its Continued Existence

Iris lacustris colonies require management to maintain required open habitat. Successional processes have altered some habitat beyond the tolerance limit for species. Planisek (1983) concluded that a pollen vector is necessary for fruit set. However further research is needed to determine the pollinator and what attracts it to the iris. Planisek also concluded that *Iris lacustris* is self-compatible, which increases the percentage of fruit set. However, seed production is still low.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to make this rule final. Based upon this evaluation, the preferred action is to list *Iris lacustris* as threatened. Threatened status is proposed due to the species' restricted range and the threats facing it and its habitat. Since the iris is not in any immediate threat of extinction, largely because of its scattered distribution, the Service is not proposing it for endangered status. Critical habitat is not being proposed for reasons discussed in the following section, "Critical Habitat."

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. The designation of critical habitat is not considered to be prudent when such designation would not be of net benefit to the species involved (50 CFR 424.12). The Service believes that designation of critical habitat for *Iris lacustris* would not be prudent because no benefit to the species can be identified that would outweigh the potential threat of vandalism or collection, which might be exacerbated by the publication of a detailed critical habitat description and map.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States. It also requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following the listing. Potential recovery actions include habitat management to reduce shade and competition of other plants and transplanting to previously occupied sites. The protection required of Federal agencies and the prohibitions against collecting are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provisions of the Act are codified at 50 CFR Part 402. Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or destroy or adversely modify its critical habitat. If a Federal action may adversely affect a listed species, or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. *Iris lacustris* is known to occur on Federal lands near an unoccupied U.S. Coast Guard Lighthouse on Thunder Bay Island, Michigan, and at several sites within the Huron-Manistee and Hiawatha National Forests. No Federal actions are anticipated which would affect *Iris lacustris* at this time.

The act and its implementing regulations found at 50 CFR 17.71 and 17.72 set forth a series of general trade prohibitions and exceptions that apply to all threatened plant species. With respect to *Iris lacustris* all trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.71 apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States, to import or export, transport in interstate or foreign commerce in the course of commercial activity, sell or offer for sale this species in interstate or foreign commerce, or remove it from areas under Federal jurisdiction and reduce it to possession. Seeds from cultivated specimens of threatened plant species are exempt from these prohibitions provided that a statement of "cultivated origin" appears on their containers. Certain exceptions can apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.72 also provide for the issuance of permits to carry out otherwise prohibited activities involving threatened species under certain circumstances. With respect to *Iris lacustris*, it is anticipated that few trade permits would be sought or issued since the species is not now common in cultivation or in the wild. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the office of Management

Authority, U.S. Fish and Wildlife Service, P.O. Box 27239, Central Station, Washington, DC 20038-7329 (703/343-4955).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the Authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the Federal Register on October 25, 1983 (48 FR 49244).

References Cited

Alverson, W.S. 1981. Status report on *Iris lacustris*. Wisconsin Dept. Nat. Res. Unpubl. rep. 13 pp.

Crispin, S.R. 1981. *Iris lacustris* in Michigan. Unpubl. rep. 6 pp.

Dykes, W.R. 1913. The genus *Iris*. Univ. Press, Cambridge. 245 pp.

Foster, R.C. 1937. A cyto-taxonomic study of the North American species of *Iris*. Contr. Gray Herb. No. 69. 81 pp.

Guire, K.E., and E.G. Voss. 1963. Distribution of distinctive shoreline plants in the Great Lakes Region. Michigan Bot. 2:99-114.

Makholm, M.M. 1986. Ecology and management of *Iris lacustris* in Wisconsin. M.S. thesis, Univ. Wisconsin. 123 pp.

Planisek, S.L. 1983. The Breeding System, Fecundity, and Dispersal of *Iris lacustris*. Michigan Bot. 22:93-102.

Read, R.H. 1976. Endangered and Threatened Vascular Plants in Wisconsin. Tech. Bull. No. 92. Sci. Areas Pres. Council. Wisconsin Department of Natural Resources. 58 pp.

Author

The primary author of this final rule is William F. Harrison (see **ADDRESSES** section) (612/725-3276 or FTS 725-3276).

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

PART 17—[AMENDED]

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*) Pub. L. 99-625, 100 Stat. 3500 (1986), unless otherwise noted.

2. Amend § 17.12(h) by adding the following, in alphabetical order under the family Iridaceae, to the list of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

* * * * *

(h) * * *

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific	Common name					
*	*	*	*	*	*	
Iridaceae:						
Iris lacustris	Dwarf lake iris	U.S.A. (MI, WI), Canada (ON)	T	330	NA	NA
*	*	*	*	*	*	

Dated: September 2, 1988.

Susan Recce,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 88-22149 Filed 9-27-88; 8:45 am]

BILLING CODE 4310-55-M

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50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for Abronia macrocarpa (Large-fruited Sand-verbena)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service has determined that a plant, *Abronia macrocarpa* (large-fruited sand-verbena), is an endangered species. The single known population of this plant occurs on active sand dunes on private land in Leon County, Texas. Because of its small population size and limited distribution, this species is vulnerable to the threats of residential development, recreation, and commercial use. The determination of endangered status for *Abronia macrocarpa* implements protection provided by the Endangered Species Act of 1973 (Act), as amended.

EFFECTIVE DATE: October 28, 1988.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours, at the Service's Regional Office of Endangered Species, 500 Gold Avenue SW., Room 4000, Albuquerque, New Mexico.

FOR FURTHER INFORMATION CONTACT: Charles McDonald, Botanist, Endangered Species Office, P.O. Box 1306, Albuquerque, New Mexico 87103 (505/766-3972 or FTS 474-3972).

SUPPLEMENTARY INFORMATION:

Background

Abronia macrocarpa is an herbaceous perennial endemic to Leon County in eastern Texas. Plants are restricted to actively blowing sand dunes in the Post Oak Woods Forest and Grassland Mosaic vegetation type (McMahan *et al.* 1984). *Quercus stellata* (post oak) and *Ilex vomitoria* (yaupon) are dominants in the small wooded islands within the dunes and in the surrounding woodlands. *Abronia macrocarpa* is one of the many herbaceous species that temporarily dominate the bare sands during spring. Some commonly associated species are *Gaillardia pulchella* (Indian blanket), *Coreopsis* sp. (tickseed), *Rhododon ciliatus*, *Stylisma* sp., and *Croton argyranthemus* (silver croton).

Showy pink-purple flower clusters make *Abronia macrocarpa* an attractive component of the spring wildflower display. Twenty to seventy-five flowers are arranged in each spherical nodding head that is golf ball size or larger. The plant's ascending or erect stems may reach 5 decimeters (20 inches) in height. Leaves are hairy, have sticky glands, and are arranged oppositely on the stems. The large scarious fruits of *Abronia macrocarpa* distinguish this species from related taxa.

The only known population of *Abronia macrocarpa* occurs on sand dunes that lie entirely within a residential resort community. The dunes cover about 30 acres, but the area occupied by *Abronia macrocarpa* is much less. In 1986, Service botanists estimated that the population contained 250 plants.

Abronia macrocarpa was first collected in 1968 by Dr. D.S. Correll and H.B. Correll at its only known locality.

Dr. L. Galloway formally named and described this species in 1972 in a monograph of the entire genus (Galloway 1972). Galloway was writing his monograph when the *Manual of the Vascular Plants of Texas* (Correll and Johnston 1970) was published, thus *Abronia macrocarpa* does not appear in the manual.

Federal action involving *Abronia macrocarpa* began when the species was included in category 1 of the December 15, 1980, notice (45 FR 82480) of plants under review for threatened or endangered classification. Category 1 comprises taxa for which the Service has substantial biological information to support proposing them as endangered or threatened. Further evaluation of *Abronia macrocarpa* indicated the need for more data, and the species was placed in category 2 (those species for which listing may be warranted but for which the Service does not presently have sufficient biological data to support proposing them as endangered or threatened) in a November 28, 1983, supplement (48 FR 53640) to the 1980 notice. A status report by Turner (1983) provided sufficient data to support returning *Abronia macrocarpa* to category 1 in the September 27, 1985, revision (50 FR 39526) of the 1980 notice and the 1983 supplement.

Species covered in the December 15, 1980, notice (45 FR 82480), including *Abronia macrocarpa*, are considered to be petitioned for listing. Section 4(b)(3)(B) of the Endangered Species Act, as amended in 1982, requires the Secretary to make certain findings on pending petitions within one year of their receipt. Section 2(b)(1) of the 1982 amendments further requires that all petitions pending on October 12, 1982, be treated as having been newly submitted on that date. This was the case for *Abronia macrocarpa* because of its inclusion in the 1980 notice. In October 1983, 1984, 1985, and 1986 the Service found that the petition to list *Abronia macrocarpa* was warranted but precluded by other listing actions of higher priority. The June 16, 1987, proposal to designate *Abronia macrocarpa* as endangered constituted the next one-year finding for this species.

Summary of Comments and Recommendations

In the June 16, 1987, proposed rule (52 FR 22944) and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate State agencies, county governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. A newspaper notice inviting public comment was published in the Bryan-College Station Eagle on July 1, 1987.

Five comments were received. Comments supporting the proposal were submitted by the Texas Natural Heritage Program, the Texas Parks and Wildlife Department, and Dr. Hugh Wilson, a botanist at Texas A&M University. Comments by the Texas State Department of Highways and Public Transportation and the management of the resort community where the species occurs, offered no new information and did not take a position on the proposal. Dr. Wilson commented that if designation of critical habitat would provide additional protection, then the dune area occupied by the plants should be so designated.

Response: Since the potential critical habitat area is on private land, the designation of critical habitat would be of no substantial benefit to the species. In addition, the precise locality information that must be supplied when critical habitat is designated could make protection and management of the site more difficult.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Abronia macrocarpa* should be classified as an endangered species. Procedures found at section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act were followed. A species may be determined to be endangered or threatened due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Abronia macrocarpa* Galloway (large-fruited sand-verbena) are as follows:

A. The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range

The historic and present known ranges of *Abronia macrocarpa* are the same; however, residential expansion and recreational activities associated with the surrounding resort community have destroyed habitat. Roads for a new residential area were recently built adjacent to the population. The open space of the sand dunes is an attractive area for horseback riding, bicycling, off-road vehicle (ORV) riding, and general play. These high-impact uses have produced wide paths where the sand is too disturbed to support vegetation.

An active oil well occurs on the sand dunes and construction of the well and the access road have destroyed habitat. Maintenance activities and oil spills could destroy additional plants and habitat. Maintenance of electric utility lines near the population could also contribute to site disturbance.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Presently, no commercial trade in *Abronia macrocarpa* exists, but horticultural interest may develop. *Abronia macrocarpa* could be developed as an ornamental, as has the similar species *Abronia ameliae*. Because of the easy accessibility of the site, the potential exists for uncontrolled collecting for horticultural research material or for commercial sale. Because the population occurs on private land, plants will not be protected, under the Endangered Species Act, from taking.

C. Disease or Predation

No threats are known.

D. The Inadequacy of Existing Regulatory Mechanisms

Currently, *Abronia macrocarpa* is not protected by either Federal or State laws or regulations.

E. Other Natural or Manmade Factors Affecting its Continued Existence

The limited distribution of this species makes it vulnerable to a variety of threats including disease, insect predation, or extreme weather conditions. Further reduction of its small population may result in a reduced gene pool that could threaten the species' reproductive capacity or genetic potential.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to make this final rule. Based on this evaluation, the preferred action is to list *Abronia macrocarpa* as endangered without critical habitat. Endangered status seems appropriate because only one known population exists and it is subject to possible destruction by residential development, recreation, and commercial activity. The reasons for not designating critical habitat are discussed below.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time a

species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for this species at the time due to its low numbers and restriction to one population. Listing of a species, with attendant publicity, highlights its rarity and attractiveness to collectors. Publication of specific location information associated with critical habitat designation would make the species more vulnerable to taking or vandalism. The location of this plant and the importance of its protection have been brought to the attention of appropriate agencies and other involved parties. Protection of the species' habitat will be addressed through the recovery process and through section 7 of that Act. Therefore, the determination of critical habitat would not be prudent, and would not result in any additional benefit to the species.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service at the earliest opportunity. Actions that may benefit *Abronia macrocarpa* include fencing, and testing seed germination and growth for possible introduction of seedlings back into the home site. The protection required of Federal agencies and the prohibitions against taking are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402. Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. However, *Abronia macrocarpa* is not known to occur on Federal lands and no Federal involvement with this species is currently known or expected.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 set forth a series of general prohibitions and exceptions that apply to all endangered plants. All prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export any endangered plant, transport it in interstate or foreign commerce in the course of the commercial activity, sell or offer it for sale in interstate or foreign commerce, or remove it from areas under Federal jurisdiction and reduce it to possession. Certain exceptions can apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered species under certain circumstances. With respect to *Abronia macrocarpa*, it is anticipated that few trade permits would be sought or issued since the species is not common in cultivation or in the wild. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Permit Branch, Office of Management Authority, U.S. Fish and Wildlife Service, Washington, DC 20240 (703/343-4955).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the Federal Register on October 25, 1983 (48 FR 49244).

References Cited

Correll, D.S., and M.C. Johnston. 1970. Manual of the vascular plants of Texas. Texas Research Foundation, Renner, Texas. 1881 pp.

Galloway, L.A. 1972. *Abronia macrocarpa* L.A. Galloway. Brittonia 24:148–149.

Galloway, L.A. 1975. Systematics of the North American desert species of *Abronia* and *Tripterocalyx* (Nyctaginaceae. Brittonia 27:328–347.

McMahan, C.A., R.G. Frye, L.K. Brown. 1984. The vegetation types of Texas including cropland. Texas Parks and Wildlife Department, Austin, Texas. 40 pp. + map.

Turner, B.L. 1983. Status report on *Abronia macrocarpa*. U.S. Fish and Wildlife Service, Albuquerque, New Mexico. 10 pp.

Author

The author of this final rule is Charles McDonald, Endangered Species Botanist, U.S. Fish And Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103 (505/766-3972 or FTS 474-3972). Status information was provided by Dr. B.L. Turner, University of Texas at Austin, Texas.

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulation Promulgation

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

PART 17—[AMENDED]

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*); Pub. L. 99-625, 100 Stat. 3500 (1986), unless otherwise noted.

2. Amend § 17.12(h) by adding the following, in alphabetical order under the family Nyctaginaceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

* * * * *

(h) * * *

Species						
Scientific name	Common name	Historic range	Status	When listed	Critical habitat	Special rules
Nyctaginaceae—Four-o'clock family:						
Abronia macrocarpa	Large-fruit sand-verbena	U.S.A. (TX)	E	388	NA	NA

Species							
Scientific name	Common name	Historic range	Status	When listed	Critical habitat	Special rules
Abronia macrocarpa	Large-fruited sand-verbena	U.S.A. (TX)	E	331	NA	NA

Dated: September 2, 1988.

Susan Recce,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 88-22150 Filed 9-27-88; 8:45 am]

BILLING CODE 4310-55-M

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for Ptilimnium nodosum

AGENCY: Fish and Wildlife Services, Interior.

ACTION: Final rule.

SUMMARY: The Service determines *Ptilimnium nodosum* (harperella) as an endangered species, under the authority of the Endangered Species Act of 1973, as amended (Act). This annual plant, which is a member of the carrot family, occurs in Alabama, Georgia, North and South Carolina, West Virginia, and Maryland. *P. nodosum* has been eliminated from over half of its known historical population sites rangewide. None of the ten currently known viable populations is in Federal ownership or other permanently protected status, although The Nature Conservancy has an easement on a small portion of one population in West Virginia and is trying to protect populations in other States. This action implements Federal protection provided by the Act for *Ptilimnium nodosum*.

EFFECTIVE DATE: October 28, 1988.

ADDRESSES: The complete file for this rule is available for public inspection, by appointment, during normal business hours at Ecological Services Field Office, 1825 Virginia Street, Annapolis, Maryland 21401.

FOR FURTHER INFORMATION CONTACT: Judy Jacobs, Endangered Species Biologist at the above address (301/269-5448).

SUPPLEMENTARY INFORMATION:

Background

In 1902 Dr. Roland M. Harper discovered a previously undescribed plant growing in a shallow pineland pond in Schley County, Georgia. Three years later, Dr. Harper collected what appeared to be a second, closely related species from a rock stream bed in DeKalb County, Alabama. These plants were named *Harperella nodosa* and *Harperella fluviatilis* respectively, in honor of their discoverer (Rose 1905, 1911). Mathias (1936) noted that despite their very different leaf structure, these plants were not generically distinct from members of the genus *Ptilimnium*. Thus, they became *Ptilimnium nodosum* and *P. fluviatile*, although they are still referred to by the common name, harperella.

In a recent examination of these taxa, Kral (1981) concluded that their observable differences in morphology and phenology were very likely due to environmental factors, rather than to inherent genetic differences. This is supported by the observation that both forms have six chromosome pairs (Easterly 1957). Kral (1981) observed that the riverine form, *P. fluviatile*, is shorter and develops roots at the nodes, probably because the plants are frequently inundated and toppled by swift-flowing water in the stream situations they inhabit. Conversely, the taller, erect and non-proliferous plants referred to as *P. nodosum* occur in the fringe of grass and sedge around ponds, where they are less likely to be knocked down by floodwaters. That these morphological differences were environmentally induced was particularly evident to Kral (1981) in the Little River population of "*P. fluviatile*" in Alabama; there, the plants from the higher seep areas, where flooding is infrequent, were more clearly assignable to the "*P. nodosum*" type. Differences in flowering time between the pond and river forms are also likely due to environmental factors, such as differences in temperature and time of flooding (R. Kral, Vanderbilt University, pers. comm., 1987). Because there is no apparent way to take into account their variation and yet to distinguish the two taxa, Kral (1981) synonymized the two under *P. nodosum*, the earlier name. In this rule, the Service follows Kral's treatment; thus, references to *P. nodosum* will be meant to include *P. fluviatile*, unless otherwise indicated.

P. nodosum, an annual plant, is a member of the carrot family (Apiaceae) that grows to a height of 0.2-1.0 meter. Unlike those of the more common members of this genus, the leaves of *P. nodosum* are reduced to hollow, quill-like structures. The small white flowers occur in heads not unlike those of "Queen Annes lace" (*Daucus carota*), and may appear from May to frost. *P. nodosum* typically occurs in two habitat types: (1) Rocky or gravel shoals and margins of clear, swift-flowing stream sections, and (2) the edges of intermittent pineland ponds or low, wet savannah meadows in the coastal plain (Kral 1983). In Georgia, the only known extant population occurs on a granite outcrop seep. This seemingly atypical setting actually has a water regime not unlike that of more characteristic pond habitat for this plant (Rawinski and Cassin 1986).

Harperella is always found on saturated substrates and readily tolerates periodic, moderate flooding. This tolerance may, in fact, be of key importance to the plant's survival, for few potential competitors are adapted to such water fluctuations. In riverine situations, short-duration spring floods annually scour the gravel bars or rock crevices where *P. nodosum* grows, preventing substantial soil accumulations in which weedy competitors might gain a foothold. When floodwaters subside harperella seeds germinate in shallow, rocky areas and complete their life cycle with their root systems submerged or saturated. Similarly, pond sites are normally full of water in the spring and, depending on the rainfall, often well into the summer. The plants have completed their life cycle by late summer or fall, when the ponds are often devoid of standing water and competing species have moved in. As in the riverine situation, it appears that *P. nodosum* has survived by its adaptation to changing water levels that few other plants can tolerate.

Because of its very specific habitat requirements, harperella can be easily extirpated from an area even by seemingly minor perturbations. In riverine situations, for example, prolonged or intensified flooding, as a result of upstream land use changes, could wash away its substrate and its seed bank. Conversely, reductions or lack of flooding, as from upstream impoundments, could decrease the species' competitive edge over more common streamside plants. In pond situations, ditching and draining for

irrigation and/or agriculture would be of obvious detriment to harperella. Conversion to permanent ponds could also eliminate this species. Additional threats facing *P. nodosum* include siltation of its stream habitat from construction and mining activities upsteam, habitat loss resulting from bank stabilization and landowner access to waterfront, and water quality degradation from excessive nutrient loading of streams.

Because harperella generally occurs in areas with a high potential for human use, these threats have already impacted *P. nodosum* at various locations throughout its range. In Alabama, one of the three known historic sites for the species is under a reservoir and another has been eliminated by excessive siltation and water quality degradation (R. Kral, pers. comm; pers. obs.). Numerous coastal plain ponds in South Carolina and Georgia, including the type locality, have been drained or otherwise severely disturbed. In West Virginia, ten thousand plants were destroyed in 1984 by construction at a housing subdivision. Throughout its range, over 50 percent of the known harperella populations have been destroyed.

State heritage programs and interested individuals have conducted intensive searches for *P. nodosum*. In West Virginia, over 260 miles of stream habitat, comprising nearly all the suitable habitats in the State, have been checked (R. Bartgis, West Virginia Natural Heritage Program, pers. comm., 1987); In Maryland also, surveys have been made of nearly all known suitable habitats for the species (D. Boone, Maryland Heritage Project pers. comm. 1987), and in South Carolina, a total of 360 coastal plain ponds have been examined in an effort to locate this plant (D. Rayner, South Carolina Heritage Trust, pers. comm., 1987). In Georgia extensive searches have been made of both granite outcrops and coastal plain ponds (T. Patrick, Georgia Natural Heritage Inventory; R. Carter, Valdosta State College, pers. comms. 1987). Georgia and Alabama sections of the Little River have also been checked (D. Whetstone, Jacksonville State University pers. comm. 1987). Despite these searches, *Ptilimnium nodosum* is presently known from only ten populations rangewide. These include six stream populations, in Alabama (Dekalb Co.), Maryland (Allegany Co.), North Carolina (one each in Granville and Chatham Cos.) and West Virginia (two Morgan Co.) and four pond populations, in Georgia (one known extant, in Greene Co.) and South Carolina (three viable populations in Aiken and Saluda Cos. The species may be present in small numbers at two additional sites in South Carolina, but its presence has not been confirmed recently and these are not considered to have long-term viability). Stream populations typically consist of tens of thousands of individuals patchily distributed along short stream sections. Location of these patches and number of individuals may change from year to year. Pond populations are more spatially predictable and typically number in the hundreds. However, numbers of individuals in these populations too may fluctuate considerably from year to year.

Federal government actions on this species began as a result of section 12 of the Endangered Species Act of 1973, which directed the Secretary of the Smithsonian Institution to prepare a report on those plants considered to be endangered, threatened, or extinct. This report (House Document No. 94–51) was presented to Congress on January 9, 1975.

The Service published a notice in the July 1, 1975, **Federal Register** (40 FR 27823), of its acceptance of the report of the Smithsonian Institution as a petition within the context of section 4(c)(2) (petition provisions are now found in section 4(b)(3)) of the Act and its intention thereby to review the status of the plant taxa named therein. On June 16, 1976, the Service published a proposal in the **Federal Register** (41 FR 24523), to determine approximately 1700 vascular plant taxa to be endangered species pursuant to section 4 of the Act. *Ptilimnium nodosum* and *P. fluviatile*) were included in the July 1, 1975, and June 1976 **Federal Register** documents. General comments received in relation to the 1976 proposal were summarized in an April 26, 1978, **Federal Register** publication (43 FR 17909). The Endangered Species Act Amendments of 1978 required that all proposals over 2 years old be withdrawn. A 1-year grace period was given to proposals already over 2 years old. In the December 10, 1979, **Federal Register** (44 FR 70796), the Service published a notice of withdrawal of the June 6, 1976, proposal, along with four other proposals that had expired.

On December 15, 1980, the Service published in the **Federal Register** a revised Notice of Review for Native Plants (45 FR 82480). *P. nodosum* and *P. fluviatile* were included in that notice as Category 2 species. Category 2 includes those taxa for which listing as endangered or threatened species may be warranted but for which substantial data on biological vulnerability and threats is not currently known or on file to support proposed rules. On November 28, 1983, the Service published in the **Federal Register** a supplement to the Notice of Review for Native Plants (48 FR 53640); the plant notice was again revised September 27, 1985 (50 FR 39526). *Ptilimnium nodosum* and *P. fluviatile* were included in both of these revisions as Category 2 species. As stated above, the Service now considers these to be a single species, *Ptilimnium nodosum*.

In 1985 the Service contracted with The Nature Conservancy's Eastern Regional Office to conduct status survey work on *Ptilimnium nodosum* (including *P. fluviatile*) and several other Federal candidate species. Their report (Rawinski and Cassin 1986) and other information indicate that. *P. nodosum* and *P. fluviatile* are appropriately considered a single taxon, that the number of extant sites for *P. nodosum* has declined significantly, and that there is a high degree of threat to remaining populations.

Section 4(b)(3)(B) of the Endangered Species Act, as amended in 1982, requires the Secretary to make certain findings on pending petitions within 12 months of their receipt. Section 2(b)(1) of the 1982 amendments further requires that all petitions pending on October 13, 1982, be treated as having been newly submitted on that date. This was the case for *Ptilimnium nodosum*, because the 1975 Smithsonian report had been accepted as a petition. On October 13, 1983; October 12, 1984; October 11, 1985; October 10, 1986; and October 11, 1987, the Service found that the petitioned listing of *Ptilimnium nodosum* was warranted but precluded by other listing actions of a higher priority and that additional data on vulnerability and threats were still being gathered. On February 25, 1988, the Service published in the **Federal Register** a proposal to list *Ptilimnium nodosum* as an endanger species (53 FR 5736). That proposal constituted the final finding required by the Endangered Species Act.

Summary of Comments and Recommendations

In the February 25, 1988, proposed rule, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Copies of the February 25, 1988, proposed rule were sent to appropriate Federal and State agencies, county officials, scientific organizations and other interested parties, with a request to provide factual information that might

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contribute to the development of a final rule. Newspaper notices inviting comment from the general public were published in the *Aiken Standard* (Aiken, South Carolina), *Atlanta Constitution* (Atlanta, Georgia), *Durham Herald* (Durham, North Carolina), *Fort Payne Times-Journal* (Ft. Payne, Alabama), *Hagerstown Herald* (Hagerstown, Maryland), and *Martinsburg Evening Journal* (Martinsburg, West Virginia). As a result of these notifications, eight comments were received. Four of these comments were from state agencies, two were from private sector conservation groups and two from private individuals.

The conservation groups, namely, The Nature Conservancy and the Maryland Enviromental Trust, wrote in full support of the listing action and indicated their willingness to assist with further conservation efforts for harperella. The West Virginia, Maryland, and North Carolina Departments of Natural Resources also indicated that they fully support this listing. Two of these letters pointed out additional potential threats to harperella, as follows.

Preliminary planning has begun for the development of an industrial plant upstream of the harperella population on the Deep River in North Carolina. This project could alter the hydrology of the river. Secondly, in West Virginia, the Department of Commerce is considering proposals to construct a ski resort development at Cacapon State Park, which might require the diversion of water from the Cacapon River for winter snowmaking and summer irrigation of the Park's golf course. This also has the potential for altering the hydrology of the river, thereby potentially impacting harperella. The two letters from private citizens were related to this project in West Virginia. Both expressed opposition to the listing on the basis that this action would interfere with the development of the state park facilities, thus adversely impacting economic growth and orderly development of this area of Morgan County. Section 4 of the Endangered Species Act as amended (Act) and regulations set forth to interpret and implement this section, require that listing determinations be made *solely* on the basis of the best available information regarding a species' status, without reference to economic or other impacts of such a determination. The information presently available on these projects is not sufficient to assess impacts to harperella at this time. If there is Federal involvement with these projects, it is likely that they will require consultation, as specified in section 7 of the Act. These projects might require modifications to accommodate the needs of harperella; however, it has been the experience of the Service that nearly all section 7 consultations are resolved so that the species is protected and the project objectives are met.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that harperella should be classified as an endangered species. Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1513 *et seq.*) and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Ptilimnium nodosum* (Rose) Mathias (harperella) are as follows:

A. The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range

The effects of human activities upon the habitat types in which *Ptilimnium nodosum* occurs have resulted in the permanent elimination of the plant and its habitat in many locations throughout its range. In Alabama, siltation, eutrophication and an impoundment have eliminated the plant from two of its three known historic localities. In Georgia and South Carolina, at least four *Ptilimnium nodosum* populations were obliterated when the ponds they inhabited were drained and converted to agriculture or otherwise severly disturbed. Of the five populations known to remain in South Carolina, two have been so severely disturbed that they are no longer considered viable (D. Rayner, pers. comm.). In West Virginia, an estimated ten thousand harperella plants were recently destroyed during construction of a vacation home subdivision (Rawinski and Cassin 1986). Approximately 90 percent of the plants remaining at this site are now restricted to a 300-foot section of stream, where they are vulnerable to trampling and/or streamside alterations.

Other cases of habitat disruption may be less obvious yet no less detrimental to the plants. Harperella populations occurring at Harper's Ferry, West Virginia in the 1830's and at Hancock, Maryland, in the early 1900's have been eliminated, probably by industrial development and the operation of riverside canals and railroads. Water quality degradation may also be threatening certain stream populations of harperella. The stretch of the Little River in which it occurs in Alabama may be receiving both excessive nutrient loading from insufficient sewage treatment and acid runoff from unreclaimed surface mines. This population is also threatened by the existence upstream of two unstable impoundments that could break and eliminate or degrade remaining harperella habitat in Alabama (D. Whetstone, pers. comm). Maryland's one known harperella population was threatened by siltation and runoff associated with the construction of a highway nearby. Although corrective measures have been taken, it is not certain that the threat to this site has been totally eliminated. Additional potential threats that have come to light include the development of an industrial plant upstream of the harperella population on the Deep River in North Carolina and the proposed water withdrawal from the Cacapon River associated with the developments at Cacapon State Park in West Virginia.

The estimated loss of 90 percent of known populations of *Ptilimnium nodosum* may actually be conservative; the species was known historically from a few traditional "good" collecting spots, but since it occupies habitat types that have been so extensively altered by human activities, it is likely that other populations were destroyed without being discovered.

B. Overutilization for Commercial, Recreational, Scientific or Educational Purposes

Harperella has not been a target for collection, since it is not a showy plant and would not survive under normal garden conditions. Although the plant has been collected for scientific study, this does not constitute a threat for the species.

C. Disease or Predation

In its pond habitat, *P. nodosum* may occasionally be subject to grazing or trampling, where it occurs along the margins of ponds that have been altered for use by livestock. However, the disruption of its habitat, rather than any occasional grazing, poses the more severe threat. Disease is not known to be a problem for this species.

D. The Inadequacy of Existing Regulatory Mechanisms

Ptilimnium nodosum is not known to occur on Federal land and presently receives no protection under any Federal law. The species' habitat receives limited protection under section 404 of the Federal Water Pollution

Control Act; however, section 404 does not assure that the habitat of an unlisted species will not be adversely modified. Some populations do occur on State-owned land, in streams over which States have jurisdiction, or on preserves owned by The Nature Conservancy. In North Carolina and Maryland, the plant is protected from trade and unauthorized take. However, except in Maryland, where it receives limited protection, it is not protected from habitat loss, the primary threat to its survival. The Nature Conservancy and State Natural Heritage Programs, particularly in West Virginia and South Carolina, have been actively pursuing both easements and voluntary protection agreements with landowners. The agreements, while potentially very useful in protecting the plants, have no legal authority.

E. Other Natural or Manmade Factors Affecting its Continued Existence

In West Virginia, the exotic grass *Arthraxon hispidus* is seen as a potential competitor to *P. nodosum*. Over the past decade, this aggressive Asian introduction has become widespread in many parts of the State. As an annual, it can compete directly with harperella for occupation of ephemeral habitats; without control, *A. hispidus* could overrun and locally extirpate harperella.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to make this rule final. Based on this evaluation, the preferred action is to list *Ptilimnium nodosum* as endangered. At least eight populations are known to have been destroyed, and over half of the remaining known populations, together constituting over 95 percent of the known individuals, are faced with continuing habitat degradation. Although stream populations may be large in terms of number of individuals, destruction or degradation of their habitat would be equally effective at extirpating them regardless of their number.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate any habitat of a species which is considered to be critical habitat at the time the species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for *Ptilimnium nodosum*. In its pond habitats, if its location were specifically delineated, as though the publication of critical habitat maps, it could be easily extirpated by vandals or curiosity seekers. Because it does not occur on Federal land, such taking would not be prohibited by the Endangered Species Act. In stream situations also, these plants would be vulnerable to vandalism if the stream sections in which they occur were specifically located. The State agencies and landowners involved in managing the habitat of this species have been informed of the plant's general locations and of the importance of protection. Therefore, the determination of critical habitat would not be prudent, and no additional benefit would result from it.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402. Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

At present, the Service has not identified any ongoing projects with Federal involvement known to have potential impacts to *P. nodosum*. The Maryland population is being monitored by Maryland Natural Heritage Program biologists to ensure the effectiveness of erosion control measures associated with the construction of Route 48 in Western Maryland. The biology and dynamics of this population are also being studied. Other federally funded or permitted actions which could affect this plant include, but are not limited to, SCS watershed management activities, FERC-permitted hydroelectric projects, construction projects involving Federal Highway Administration or Farmers Home Administration funds, or those within the jurisdiction of the Corps of Engineers.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 set forth a series of general trade prohibitions and exceptions that apply to all endangered plants. All trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, would apply. These prohibitions, in part, would make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, sell or offer for sale this species in interstate or foreign commerce, or to remove and reduce to possession the species from areas under Federal jurisdiction. Certain exceptions can apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered species under certain circumstances. In the case of *Ptilimnium nodosum*, it is anticipated that few trade permits would ever be sought or issued since the species is not common in cultivation or in the wild. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Office of Management Authority, U.S. Fish and Wildlife Service, P.O. Box 27329, Washington, DC 20036 (202/343–4955).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

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Author

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List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulation Promulgation

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

PART 17—[AMENDED]

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93–205, 87 Stat. 884; Pub. L. 94–359, 90 Stat. 911; Pub. L. 95–632, 92 Stat. 3751; Pub. L. 96–159, 93 Stat. 1225; Pub. L. 97–304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*); Pub. L. 99–625, 100 Stat. 3500 (1986), unless otherwise noted.

2. Amend § 17.12(h) by adding the following, in alphabetical order under the Family Apiaceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

* * * * *

(h) * * *

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Apiaceae—Parsley Family:						
*	*	*	*	*	*	
Ptilimnium nodosum (= *P. fluviatile*).	Harperella	U.S.A. (AL, GA, MD, NC, SC, WV)...	E	332	NA	NA
*	*	*	*	*	*	

Dated: September 2, 1988.

Susan Recce,

Acting Assistant Secretary for Fish and Wildlife and Parks.

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H.R. 2701/Pub. L. 100–439

To amend the Natural Gas Policy Act of 1978 to remove certain contract duration and right of first refusal requirements. (Sept. 22, 1988; 102 Stat. 1720; 1 page) Price: $1.00

H.R. 4775/Pub. L. 100–440

Treasury, Postal Service and General Government Appropriations Act, 1989. (Sept. 22, 1988; 102 Stat. 1721; 39 pages) Price: $1.25

S. 52/Pub. L. 100–441

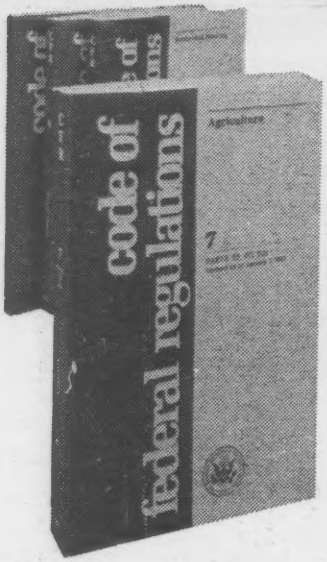
Continental Scientific Drilling and Exploration Act. (Sept. 22, 1988; 102 Stat. 1760; 3 pages) Price: $1.00

S. 1360/Pub. L. 100–442

To amend the Indian Financing Act of 1974, and for other purposes. (Sept. 22, 1988; 102 Stat. 1763; 3 pages) Price: $1.00

S. 1889/Pub. L. 100–443

Geothermal Steam Act Amendments of 1988. (Sept. 22, 1988; 102 Stat. 1766; 6 pages) Price: $1.00



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